REMARKS

Favorable reconsideration of the subject application is respectfully requested in view of the comments below.

Please cancel non-elected claims 1-7, 24-25, 27-28, 39-54, 65-66, 68-69, 97-98 and 100-101 without prejudice to prosecution in a divisional application claiming priority to the above-identified application. Claims 18-23, 26, 29-38, 55-64, 67, 70-96, 99 and 102-107 have been examined on the merits. Claims 18, 55-59, 78, and 80-81 have been amended. No new matter has been added by the claim amendments. Claims 18-23, 26, 29-38, 55-64, 67, 70-96, 99, and 102-107 are pending.

CLAIM REJECTIONS UNDER 35 U.S.C. § 112, FIRST PARAGRAPH

Claims 18-23, 26, 29-38, 55-64, 67, 70-96, 99, and 102-107 have been rejected as not being adequately described in the specification. The Examiner states that the specification only discloses the use of dendritic cells or monocytes and does not provide adequate description of all antigen presenting cell for use in the present invention.

To expedite prosecution of the application, claims 18, 55, and 78, have been amended to recite "comprising dendritic cells and/or monocytes." The present claim amendments render this ground of rejection moot and, accordingly, request withdrawal of this ground of rejection.

The Examiner also states that the specification only discloses treatment using autologous and syngeneic cells and does not provide adequate description of treatment using xenogeneic or allogeneic cells. To expedite prosecution of the application, claims 18, 55 and 78 have been amended to recite "which are autologous and syngeneic cells." Applicants thus submit that the present amendments render this ground of rejection moot. Accordingly, applicants request withdrawal of this ground of rejection.

The Examiner asserts that the specification does not teach tumor cells with express "shared" tumor antigens and, therefore, the specification provides insufficient guidance to enable treatment of tumors pulsed with tumor lysates from a tumor which "does not express

any of the same tumor antigens as the host tumor."

Claims 55 and 78 have been amended to recite "which are derived from the subject or the same type of cancer cells as patient-derived cancer cells." Applicants, therefore, submit that this ground of rejection is moot and respectfully requests withdrawal of this ground of rejection.

Finally, the Examiner maintained the assertion that the specification does not enable administering the disclosed immunogenic compositions by any route of administration to any site in the mammal to be treated.

Claims 55 and 78 have been amended to recite "wherein administration of said first recombinant vaccinia virus and said second composition is at or near lymph node(s)." Applicants submit that the present amendments render this ground of rejection moot and accordingly respectfully request withdrawal this ground of rejection.

CLAIM REJECTIONS UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

The Examiner maintained the rejection of claims 56-59 and 80-81 as being indefinite for failing to particularly point out and distinctly claim the subject matter which is regarded as the invention. The Examiner states that the term "about" is indefinite as it is a relative term with no fixed metes and bounds. Applicants submit the present claim amendments render this ground of rejection and accordingly request withdrawal of this ground of rejection.

CLAIM REJECTIONS UNDER 35 U.S.C. § 103(a)

The Examiner maintained the rejection of claims 18-23, 26, 29-38, 55-64, 67, 70-96, 99, and 102-107 as being unpatentable over Nestle et al. ("Nestle") in view of Sivandandham *et al.* ("Sivandandham"). The Examiner states that Nestle teaches methods of vaccinating patients with patient-derived dendritic cells pulsed with melanoma tumor lysate.

Applicants respectfully disagree and traverse this ground of rejection. The rejected claims are directed to immunotherapeutic vaccines and methods of using vaccines that have two parts. In the present invention, the vaccine is comprised of i) a recombinant vaccinia virus (VVR) encoding at least one first immunostimulating molecule, and ii) antigen

presenting cells pulsed with a preparation comprising enucleated cytosol and cell membranes of cancer cells infected with VVR encoding at least one second immunostimulating molecule. The antigen presenting cells are pulsed with tumor cells infected with VVR to allow for the production of *enhanced* immune response.

In contrast, Nestle, the primary reference relied on by the Examiner, does not teach or suggest a vaccine comprising two parts. Instead, Nestle only teaches a vaccine comprising of dendritic cells pulsed with either peptides or tumor lysates. Specifically, Nestle teaches the use of *in vitro* generated monocyte-derived DCs generated *in the presence* of IL-4 and GM-CSF (see page 328) and the use of KLH (globular protein antigen) as "crucial" for induction of a immune response. (See page 331, column 2). Nestle does not disclose or suggest the use of VVR encoding immunostimulating molecules, let alone the use of VVR *in conjunction* with antigen presenting cells pulsed with tumor cell lysates of cancer cells infected with a VVR encoding a second immunostimulating molecule for use as anti-tumor therapies. Therefore, the primary reference fails to teach or suggest a vaccine comprised of two parts let alone the claimed vaccinia.

In addition, Sivanandham *et al.* does not cure the deficiencies of Nestle. Sivanandham *et al.* discloses a murine colon oncolysate prepared with IL-2 encoded VVR used in treating syngeneic murine colon adenocarcimoma metastasis. It does not disclose a two- part vaccine of the present invention. Therefore, it is only with hindsight that the examiner states that one skilled in the art would have a reasonable expectation of success in using the co-administration of viral oncolysate and exogenous IL-2. Therefore, Sivanandham does not overcome the shortcomings of Nestle. In addition, there is no motivation or suggestion to combine these two references. Moreover, since neither Nestle nor Sivanandham teach nor suggest the two part vaccine of the present invention, the combination of the two do not also teach the two part vaccine. In view of the remarks above, Applicants respectfully request that this rejection should also be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, it is firmly believed that the subject invention is in condition for allowance, which action is earnestly solicited.

The Office is hereby authorized to charge Deposit Account No. 11-0600 with any additional fees required by this paper or credit any overpayment.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned directly at (202) 220-4258.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,

Date: Dec. 1, 2003

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